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Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 9A, 9B, 9C, and 9D. These sheets, which include just these figures, replace the original sheets, which also included just these figures.

In each of Figures 9A, 9B, 9C, and 9D, the graph on the right hand side of the figure has been identified as a "S11 Curve." No new matter is added by this change since this is the same terminology that was used to describe Figure 9 in the Brief Description of the Drawings (see page 5, line 4, of applicants' specification).

The Attachment contains:

- (1) Replacement Sheets 7/8 and 8/8.
- (2) Annotated Sheets 7/8 and 8/8 showing the changes made.

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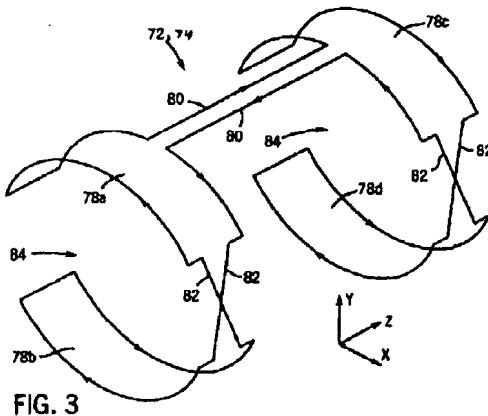
REMARKS

This is response to the Office Action dated March 19, 2007.

By the above amendment, applicants have added the designation "S11 Curve" to each of Figures 9A, 9B, 9C, and 9D. As discussed in applicants prior response, the S11 curves are not a "component" of applicants' coil arrays but relate to the performance of those arrays. The inclusion of the "S11 Curve" designation in each of Figures 9A, 9B, 9C, and 9D is believed to address the Examiner's request that there be a literal reference to the S11 curves in applicants' figures.

In addition to the objection to the drawings, the Examiner also rejected applicants' Claims 1-18 under 35 USC §102(e) based on Boskamp et al., U.S. Patent No. 6,590,392 and Boskamp et al., U.S. Patent Application Publication No. 2002/0149367 (collectively, Boskamp). Applicants respectfully traverse these rejections.

In the Office Action, the Examiner identified elements 78c, 78d or 78a, 78b of Boskamp as satisfying the limitation of applicants' independent Claims 1 and 7 that calls for a "pair of main conductors extending generally parallel to the direction of the magnetic field and located on opposite sides of the space." See paragraphs 8 and 14 of the Office Action. The following is a copy of Figure 3 of Boskamp:



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As can be seen from the X-Y-Z coordinate system shown in this figure, conductors 78a, 78b, 78c, and 78d are all parallel to Boskamp's X-Y plane, i.e., perpendicular to Boskamp's Z-axis. Boskamp's magnetic field, however, is along the Z-axis:

...Z-axis 86...is parallel to the homogenous static magnetic field B_0 . X-axis 88 and Y-axis 90 define vertical and horizontal axes, respectively.... (Boskamp issued patent at column 6, lines 13-16.)

Accordingly, conductors 78a, 78b, 78c, and 78d do not "extending generally parallel to the direction of the magnetic field," but are perpendicular to that direction. It is thus clear that Boskamp does not disclose or suggest the subject matter of independent Claims 1 and 7.

As to independent Claim 17, in the March 19th Office Action, the Examiner asserted that Boskamp's transmit/receive switch 62 corresponds to Claim 17's "switching means for selectively connecting the receiver channel sequentially to the coils." The following is Boskamp's entire discussion of switch 62:

A transceiver module 58 in the system control 32 produces pulses which are amplified by an RF amplifier 60 and coupled to the RF coil assembly 56 by a transmit/receive switch 62. The resulting signals emitted by the excited nuclei in the patient may be sensed by the same RF coil assembly 56 or a portion thereof and coupled through the transmit/receive switch 62 to a preamplifier 64. The amplified MR signals are demodulated, filtered, and digitized in the receiver section of the transceiver 58. The transmit/receive switch 62 is controlled by a signal from the pulse generator module 38 to electrically connect the RF amplifier 60 to the coil assembly 56 during the transmit mode and to connect the preamplifier 64 to the coil assembly 56 during the receive mode. The transmit/receive switch 62 can also enable a separate RF coil (for example, a surface coil) to be used in either the transmit or receive mode. (Boskamp issued patent at column 4, lines 35-52.)

and

The unequal power splitter 93 is further connected to a computer 94 that includes operator console 12, computer system 20, disk storage 28, tape 30, control 32, physiological acquisition controller 44, scan room interface 46, patient positioning system 48, transmit/receive switch 62, and amplifiers 60, 64, as shown in FIG. 1. (Boskamp issued patent at column 6, lines 35-40.)

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and

The activation of the center coil 70 only or in unison with the pair of end coils 84 provides a method for switching the FOV between a shorter and a longer FOV. Decreasing the center coil 70 size relative to a standard whole-body coil results in less wrap-around artifacts during image reconstruction and less irradiation when scanning a small FOV.

Switching between the FOV's is controlled by system control 32 which passes commands for the desired coil activation via scan room interface 46 and/or the transmit/receive switch 62. (Boskamp issued patent at column 7, lines 43-52.)

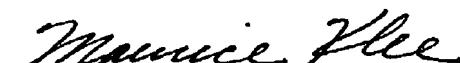
Plainly, Boskamp does not contain any disclosure that switch 62 selectively connects a receiver channel sequentially to a "a plurality of electrically separate coils spaced angularly about the axis of [a] cylindrical space, each coil including a pair of main conductors extending axially on diametrically opposite sides of the cylindrical space" as required by Claim 17. Rather, switch 62 is used in connection with changing Boskamp's field-of-view (FOV) and in switching between transmitting and receiving. Accordingly, as with Claims 1 and 7, Boskamp does not disclose or suggest the subject matter of Claim 17.

There are further distinctions between applicants' claims and Boskamp but a detailed discussion of those differences is not considered necessary in view of the above.

The foregoing comments and amendments to the drawings are believed to address all of the issues raised by the Examiner. Accordingly, reconsideration and the issuance of a Notice of Allowance for this application are respectfully requested.

Respectfully submitted,

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 Reply to Office Action of March 19, 2007
 Annotated Sheet Showing Changes

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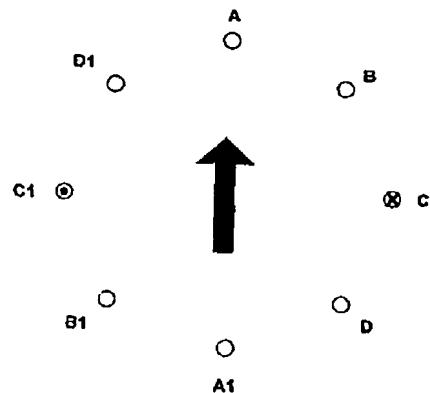
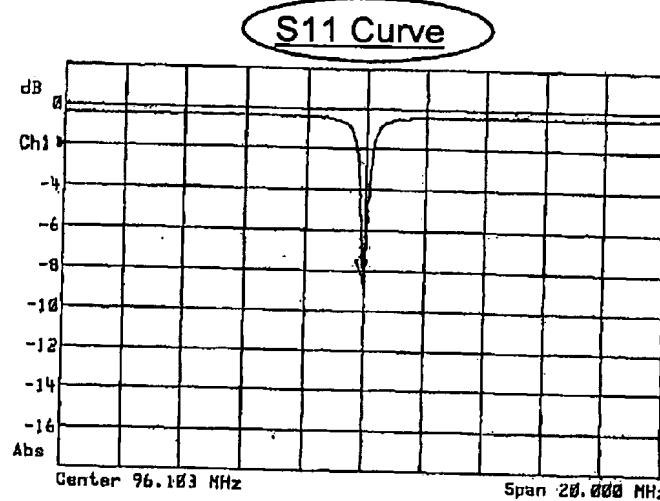
*Name of curve added*

FIG 9A

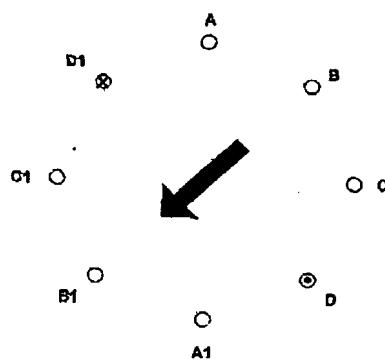
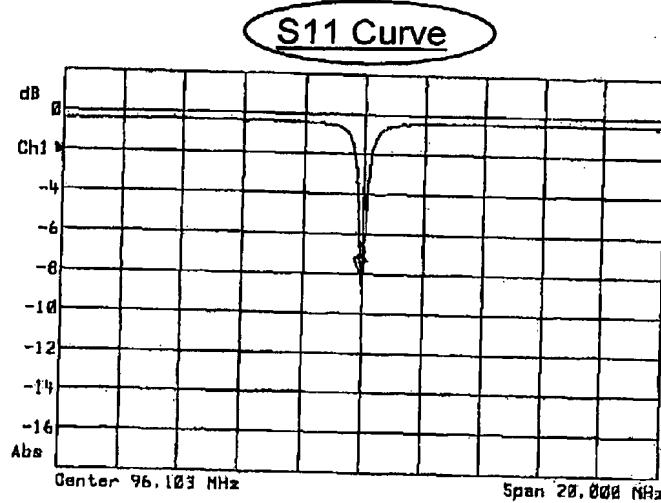
*Name of curve added*

FIG 9B

Appl. No. 10/525,932
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 Annotated Sheet Showing Changes

8/8

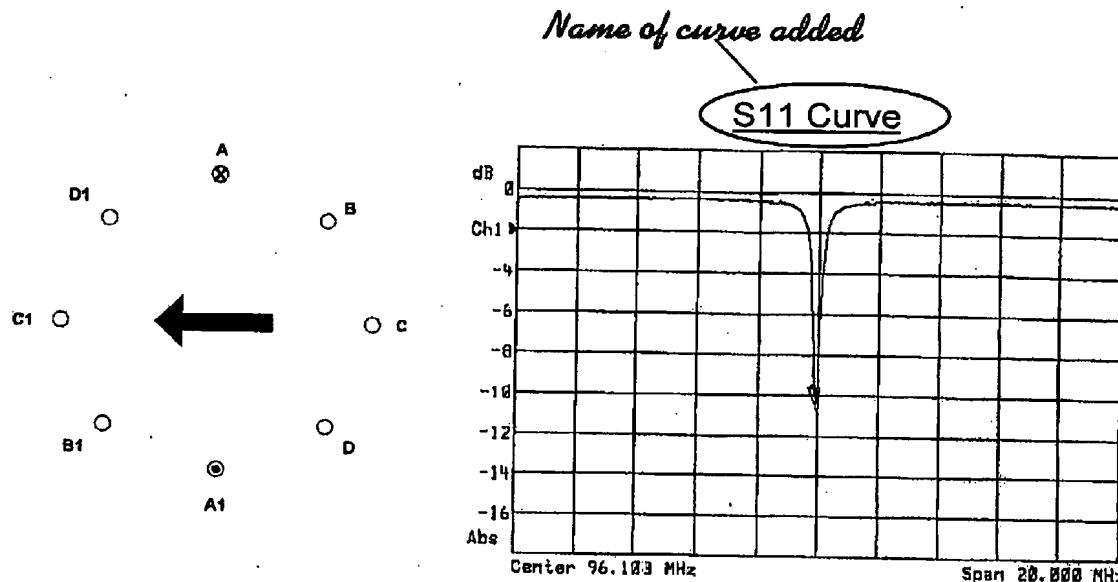


FIG 9C

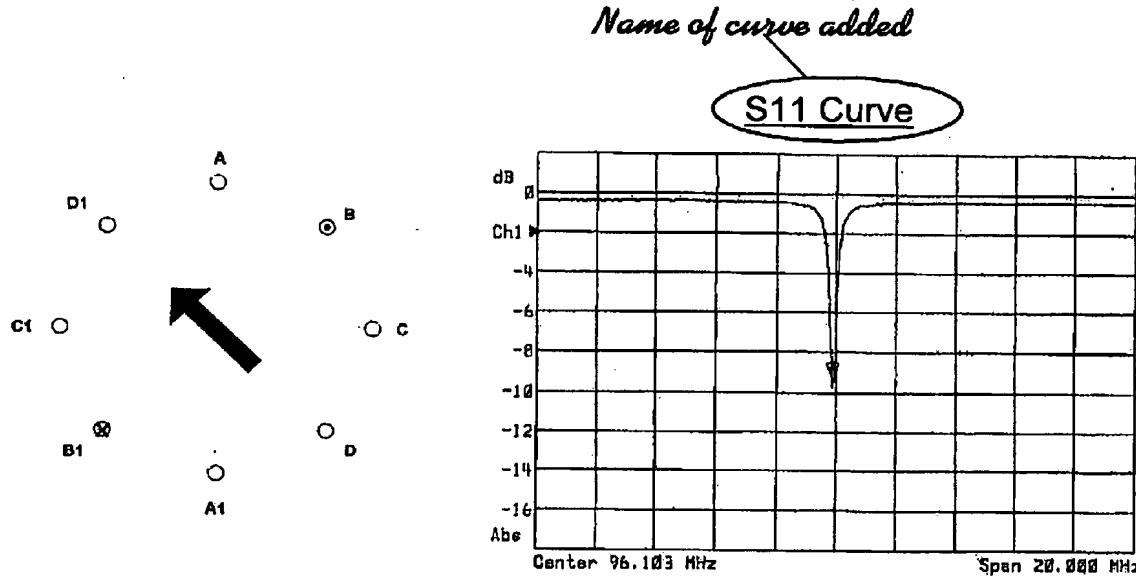


FIG 9D